DEPARTMENT OF SAFETY AND INSPECTIONS
Bob Kessler, Director

CITY OF SAINT PAUL
Christopher B. Coleman, Mayor

WWW.STPAUL.GOV/DSI

BULLETIN 05-1

1. **We have Moved!**- As of May 2, 2005 we are in the Commerce Building at 8 Fourth Street E. Suite 200, 55101-1024. Phone numbers and call-in hours (7:30-9:00am M-F) will be the same.
2. ALL service upgrades or service panel changeouts of any kind, **including fuse to breaker changes** or breaker-to-breaker changes must have Bulletin 80-1 done as part of the work. All circuits and the service are required on the permit. All our previous bulletins & other information are available at WWW.LIEP.US.
3. Call for trench inspections! Note Section 3800.3770 of the Minnesota Rules which state that if work is covered without an inspection the contractor is responsible for all costs incurred with removing the cover for an inspection. This section also includes wallcoverings installed without a rough-in inspection. We **normally** have same-day response on inspections called in before 9am M-F, so please don't use us as an excuse for inspection delays.
4. The 2005 National Electrical Code went into effect on July 1, 2005. Any permits processed before that date will continue to be under the 2002 NEC until the end of the project. Any permits processed on or after that date are under the 2005 NEC.
5. Construction trailers must be fed with an insulated equipment grounding conductor, requiring either a raceway with individually insulated conductors or a listed cord. All other applicable parts of Article 550 also apply (Section 550.4(A)).
6. **Section 210.52(F)**. Unless a dwelling unit meets one of the two exceptions to this section, a 125-volt, 20 ampere receptacle shall be installed at the laundry location even if the appliances installed there require a different voltage or current rating. Many apartments/condos are installing "stackable" washer/dryer combinations which in some cases require only a 240-volt, 30 ampere receptacle for power. The NEC still requires that a 125-volt, 20 ampere laundry receptacle on its own circuit be installed even though it is not needed at that time.
7. **Section 210.8(B)(3)** Ground-fault protection of receptacles in kitchens in other than dwelling units. Unfortunately, due to all the variables involved, it is virtually impossible to develop a hard and fast rule on enforcement of this Section. Please contact the area inspector before starting a job in this type of occupancy to discuss how this will be enforced in your particular instance. Remember, this is all 125-volt, 15 & 20 ampere receptacles in all locations within these kitchens- no exceptions!
8. **Section 210.12(B)**. In efficiency apartments (basically one big room with a small bathroom off it) All receptacles except those in the kitchen area (covered under 210.11(C)(1)) must be AFCI-protected, since the "bedroom" area cannot be clearly defined.
9. **Section 334.15(B)**- Some basements are using sheets of styrofoam glued to basement walls in lieu of walls composed of furring strips or standard 2X4's or similar. The sheetrock covering is then secured to the foam sheets. The wiring method, usually Nonmetallic-Sheathed cable is usually installed in grooves cut or routed in the foam. This installation method still requires support of the cable per Article 334. If the NM-B is laid in a shallow groove, one acceptable method of support is to take the cutout piece of foam and re-install it over the cable after installation. The cable still must be protected from physical damage as required in Section 300.4
10. **Section 210.12(B)**- AFCI protection of all 125-volt, 15 & 20-ampere outlets in bedrooms is required. This includes, but is not limited to, permanently-installed heaters, smoke detectors, air conditioners, and any other "outlet" (not just "receptacle") of the voltage and amperage above.
11. Any questions concerning the location or type of meter or meter socket, or service drop location need to be referred to XCEL Energy. They have jurisdiction over these questions and can refuse electrical service if their requirements are not followed. Call their Builders Hotline at (800) 628-2121.

(OVER)

2005 NEC:

The following are some of the more significant changes for the 2005 NEC. Many of these are not complete summaries that may cover all possible installations- see the Code text for complete requirements. Interpretations of St. Paul are specifically identified as such, and are valid only for St. Paul. Other jurisdictions may have differing interpretations, and should be consulted on any projects in their jurisdiction.

1. **210.8(A)(7)**. This change adds the words *Laundry* and *Utility* to the title of this section. This will require that any 125v, 15 or 20 ampere receptacle installed within a radius of 6' of a laundry, utility or wet bar sink will have to be GFCI protected. This may include a majority of the required 20 ampere laundry receptacles. There is no exception for dedicated space or accessibility of the receptacle.

2. **Section 210.8 (B)(4)** will require that all 125-volt, 15 & 20- ampere receptacles installed in outdoor locations accessible to the general public must be GFCI-protected, regardless of the type of occupancy. This would now include commercial and industrial locations formerly exempt from this requirement. Again, there is no exemption for dedicated receptacles or receptacles installed behind equipment.

3. **Section 230.2(A)(6)**. St. Paul will require special permission (written) in advance of this new section being used. An occupancy must have an actual need for additional reliability and an additional service must be from a source separated enough from the primary service to actually offer a legitimate redundancy. This will not be a reason to add an additional service just to relieve an existing service that is filled to its capacity.

4. **Section 240.21(B)**. Note that this change will specifically prohibit "rounding up" to the next standard overcurrent device size for any of the feeder taps(including transformer secondary taps) under this section. An example would be a feeder tap of 500 KCMIL copper, rated at 380 amperes (75 degrees C) under 310.16. Instead of "rounding up" to a 400-ampere OC device as may have been done in the past, the OC device will now be the next standard size smaller, 350-amperes.

5. **Section 250.50** now requires that all grounding electrodes that are present be used as part of the grounding electrode system. This will mean that the concrete-encased electrode described in Sect. 250.52 (A)(3) will have to be used unless the building is existing. Thus if the footings have a total of 20' or more of contiguous ½" diameter uncoated reinforcing rod in the footings of a new building, this grounding electrode will be required to be used as part of the electrode system.

6. **Section 314.16(B)(1)**. Conductors that are "looped"at a box where the loop is at least twice the minimum length required for free conductors in 300.14 shall now be counted as 2 conductors for box fill, not one.

7. **Section 400.5(A)**- Note that cords used in an ambient of higher than 86 degrees F. must derate according to the temperature correction table in Sect. 300.16. Many industrial locations have temperatures higher than 86 degrees F.

8. **Sect 400.8(7)**- This new section clarifies that cords shall not be subject to physical damage. This change clarifies that even though there are several types of hard service & extra-hard service cords available, they are not strong enough to withstand physical damage, and will not be permitted in such places.

9. **Section 408.4**- This change requires that a more specific circuit directory be written by the installer. This change prohibits the "lights, lights, recepts., recepts."-type directory seen in many panelboards. St. Paul will require that all new panelboards have a directory that indicates the specific floor and at least the general location on that floor for each circuit. Do not use names to identify areas such as "Bob's office". Bob may move or retire, leaving the location of the circuit open to confusion. On existing panelboards in St. Paul, where you are adding one or more new circuits, you are responsible for describing the location of only the circuit(s) you have added **or modified. Old circuits in new panelboards must be identified like new circuits.**

10. **Section 422.51**- All vending machines in all locations (indoors and outdoors) are required to have GFCI protection, either integrally in the cord, or with a GFCI-protected receptacle. Unfortunately, there is no clear definition in the code or elsewhere as to what actually constitutes a vending machine. Therefore, St. Paul will require that all machines which accept cash, tokens or similar methods of payment and dispense food, candy or drinks for consumption will be considered vending machines for purposes of enforcement of this section.

11. **Section 422.16(B)(4)** Requires that if a range hood is powered through a receptacle, that the receptacle be on "an individual branch circuit". St. Paul will enforce this on any installation, new or old, where a receptacle is added to supply a range hood.